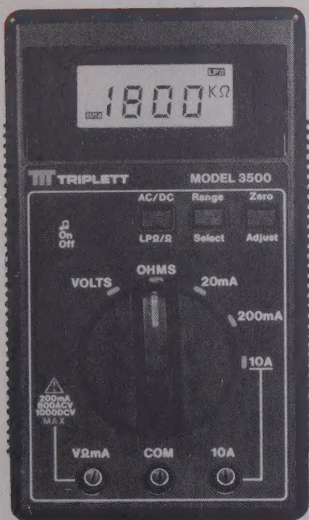


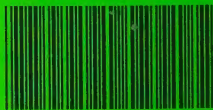


MODEL
3500

AUTORANGE DIGITAL MULTIMETER

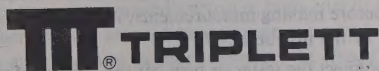
TRIPLETT
INSTRUCTION MANUAL

MP MASTER



MA26416

INSTRUCTION MANUAL MODEL 3500 AUTORANGE DIGITAL MULTIMETER



**Triplett Corporation
One Triplett Drive
Bluffton, Ohio 45817**

SAFETY RULES

Warning

This tester has been designed with your safety in mind. However, no design can completely protect against incorrect use. Electrical circuits can be dangerous and/or lethal when lack of caution or poor safety practices are used.

Read The Manual

Read this Instruction Manual carefully and completely.

Voltages and currents within the capability of this test equipment can be hazardous. Follow the instructions in this manual for every measurement. Read and understand the general instructions before attempting to use this tester. Do not exceed the limits of the tester.

Safety Check

Double check the switch setting and lead connections before making measurements. Are you following all of the instructions?

Disconnect the tester or turn off the power before changing switch positions.

Do not connect to circuits with voltage present when such switch is in any ohms or current position.

When replacing fuses use only specified type fuses and insert in correct fuse holder.

Don't Touch

Don't touch exposed wiring, connections or other "live" parts of an electrical circuit. If in doubt, check the circuit first for voltage before touching it.

Turn off the power to a circuit before connecting test probes to it. Be sure there is no voltage present before you touch the circuit.

Do not use cracked or broken test leads.

High Voltage Is Dangerous

Always start with the power off. Be sure there is no voltage present before making connections to the circuit.

Don't touch the tester, its test leads, or any part of the circuit while it is on.

Before disconnecting the tester, turn the circuit off and wait for the meter to return to "zero."

Distribution Circuits Pack A Punch

In high energy circuits such as distribution transformers and bus bars, dangerous arcs of explosive nature can occur if the circuit is shorted. If the tester is connected across a high energy circuit when set to a low resistance range, a current range, or any other low impedance range, the circuit is virtually shorted.

Special equipment designed for use with these circuits is available. Contact a qualified person for assistance before attempting to make measurements on any high energy circuit.

Safety Is No Accident

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INTRODUCTION

The Model 3500 is a compact portable Autorange-Manual Digital Multimeter. It was designed for ease of use in making voltage, resistance and current measurements.

In addition to autorange, which eliminates the need for selecting a range, the readout automatically displays the ranges and functions in use for any measurement.

The input jacks are arranged so that a minimum of test lead switching is required, only for 10 amp measurements do test leads need to be changed from one jack to another.

The unit employs a tilt stand to achieve greater visibility of the display and controls. It also features a battery and fuse compartment in the rear of the tester to make battery and fuse replacement very convenient.

The unit has a rounded and flush appearance which makes storage in pockets or tool kits convenient.

The corrugated sides and back provide a non slip grip of tester for the user.

The tester also utilizes momentary type push buttons for ease of use.

The tester incorporates a dual series fuse arrangement for improved protection. One fuse is rated at .3 amp at 250VAC and the other is rated at 2 amps at 600VAC.

SPECIFICATIONS

Accuracies are given for 1 year 18 °C to 28 °C.

DC Volts

Ranges:

Automatically or manually selected.

0-0.2, $\pm 0.25\%$ Rdg. ± 1 digit.

0-2-20-200, $\pm 0.5\%$ Rdg. ± 1 digit.

0-1000, $\pm 0.75\%$ Rdg. ± 1 digit.

Input Impedance:

10 Meg all ranges except 0.2V
> 100 Meg.

Full Scale Step

Response:

3 sec. maximum.

Overload Protected to 1000VDC.

AC Volts

Ranges:

Automatically or manually selected.

0-2-20-200, $\pm 0.75\%$ Rdg.
 ± 3 digits.

0-600, ± 1.0 Rdg. ± 3 digits.

Frequency Response
at Specified

Accuracy:

40Hz to 500Hz all ranges.

Input Impedance:

10 Meg all ranges.

Full Scale Step

Response:

Manual mode 3 sec. max.,
auto 5 sec. max.

Overload Protected to 600VAC.

SPECIFICATIONS (Continued)

Hi Power Ohms

Ranges: Automatically or manually selected.
0-200-2k-20k-200k, 0.5 %
Rdg. ± 1 digit.
0-2M, $\pm 1.5\%$ Rdg. ± 1 digit.

Audible Continuity Tone:

(At  position) activated with less than 19 digits all ranges.

Maximum Open
Circuit Voltage: 1.5V.

Full Scale Step
Response: Manual mode 3 sec. max.,
auto 5 sec. max.

Overload Protected to 250VAC.

Low Power Ohms

Ranges: Automatically or manually selected.
0-2k-20k-200k, $\pm 0.75\%$
Rdg. ± 1 digit.
0-2M, $\pm 1.5\%$ Rdg. ± 1 digit.

Audible Continuity Tone:

(At  position) activated with less than 19 digits all ranges.

Maximum Open
Circuit Voltage: 400mV.

Full Scale Step
Response: Manual mode 3 sec. max.,
auto 5 sec. max.

Overload Protected to 250VAC.

SPECIFICATIONS (Continued)

DC Current

Ranges: Manually selected.
0-20mA-200mA, $\pm 1.2\%$
Rdg. ± 1 digit.
0-10A, $\pm 1.7\%$ Rdg. ± 1
digit.

Voltage Burden: 200mV on 20mA and 200mA,
100mV on 10A.

Full Scale Step
Response: 3 sec. maximum.

Overload Protected to 250VAC.

AC Current

Ranges: Manually selected.
0-20mA-200mA, $\pm 1.5\%$
Rdg. ± 3 digits.
0-10A, $\pm 1.7\%$ Rdg. ± 3
digits.

Voltage Burden: 200mV on 20mA and 200mA,
100mV on 10A.

Frequency Response
at Specified

Accuracy: 40Hz to 500Hz all ranges.

Full Scale Step
Response: 5 sec. maximum.

Overload Protected to 250VAC.

SPECIFICATIONS (Continued)

General

Display: 10mm, 3½ digit LCD with annunciators, MV, V, mA, A, Ω , k Ω , LP Ω , AUTO, BATT, ADJ. - AC.

Overrange Indication: MSD "1" blinks, tone alarm (at  position), except at 1000DCV, 600ACV, 10DCA and 10ACA.

Overload Protection: Up to 1000VDC and 750 VAC without fuse blow; fused up to 600 volts on ohms and current ranges.

Auto Polarity: Positive implied, negative indicated.

CMMR: 90dB minimum at 60Hz.

NMRR: 40dB minimum at 60Hz.

Audible Continuity
Tone:

Activated with less than 19 digits on all ranges (at  position), level 65dB at 2 inches, frequency approx. 4kHz, tone delay 0.5 sec. typical.

Operating

Temperature: +18°C to 28°C reduced accuracy at 28°C to 40°C and 0 to 18°C.

Temperature

Coefficient: .1% of applicable rated accuracy per degree C.
28°C to 40°C and 0 to 18°C.

SPECIFICATIONS (Continued)

Storage

Temperature: -20°C to $+60^{\circ}\text{C}$.

Battery: NEDA $1\frac{1}{2}$ V, 15A (AA) - 2 cells.

Battery Life: 300 hours continuous operation.

Low Battery

Indication: Shows on display when approximately 50 hours of life remain.

Fuse: .3A/250V, Littelfuse millimeter type 212.300 and 2A/600V Bussmann BBS 2.

Test Leads: Safety type black and red, 36" long with screw on alligator clips.

Case: Molded black high impact thermoplastic with textured surface finish.

Dimensions: Approx. $3\frac{1}{2}$ "W X 6"H X $1\frac{1}{8}$ "D (88mmW X 155mmH X 34mmD).

Weight: Approx. 12.5 oz. (0.35kg) with battery.

PREPARATION FOR USE

Battery Installation - Open Battery Compartment

To remove rear battery compartment cover proceed as follows: Be sure the test leads are removed from the front jacks.

Place thumb finger on the arrow of the battery compartment cover, depress and push in the direction indicated by the arrow. This will release battery cover for removal. Install 2 AA cells in compartment. Be sure to observe the polarity markings in the compartment. Improper battery polarity installation could result in damage to the tester.

While the cover is open inspect the fuses. The large fuse is a Bussmann BBS 2 amp, 600V. The small fuse is a .3 amp, 250V, Littelfuse 212.300. A spare .3 amp fuse is located in the lower center of the compartment.

Reinstall the battery cover in reverse order of its removal.

USE OF CONTROLS

Main Function Selector

Selects volts, ohms or any of three current ranges. Volts and ohms are auto or manual ranging. The current positions are manual ranging only.

Off-ON- Switch

Three positions - OFF, ON, ON with audible tone for continuity and overrange warning indications.

AC-DC Button

Button selects AC or DC function for voltage or current measurements. The AC function when selected appears on the display. The DC function is implied, there is no indication on display.

LP Ω / Ω Button

Button selects low power ohms (LP Ω) or hi power ohms (Ω), function selected appears on display.

Range Select Button

The tester is normally in the autorange mode on volts and ohms. This is indicated by an "Auto" sign on the display. For manual ranging, continue depressing range select button until the decimal point on the display indicates the desired range. See Table 1 for sequence of decimal movement for various functions. Table 2 gives examples of actual readings with inputs applied on various ranges.

Note - When tester is switched to manual ranging the AUTO sign disappears from the display.

USE OF CONTROLS (Continued)

To return tester to autorange mode - turn tester Off and On, or switch function select to another function (not while voltage is applied) or depress the AC-DC button twice.

The current ranges are manual ranging only.

Zero Adjust Button

Zeroes reading when depressed with test leads shorted together. Note - when the tester is in the zero mode the sign ADJ appears on the display. When the zero adjust button is depressed again the tester will revert back to the non zeroed mode and the ADJ sign will disappear from display.

If the user is going to use manual ranging or switch functions he should do that first before depressing the zero adjust button, since changing functions or switching to manual ranging will cancel the zero adjust mode.

The zeroing operation should always be done last in the sequence of setup.

USE OF CONTROLS (Continued)

Offset Measurements

The zero adjust button can also be used to make offset measurements provided the offset is less than the two least significant digits or 99 counts.

Since the zeroing mode utilizes a memory to convert the last two digits to zero, the stored reading (when zero adjust button is depressed) will be subtracted from the applied input signal or resistance.

An example of how this works is as follows:

Set tester to 200DCmA and apply 5DCmA. Depress zero adjust to store the reading of 5mA, last two digits revert to zero.

Next apply 15DCmA to tester input jacks, the tester should read 10mA.

If 3mA is applied, read -2mA .

If 0mA is applied, read -5mA .

The same results will be achieved when offset measurements are made with voltage or with resistance.

USE OF CONTROLS (Continued)

Important Note - when in the ZERO ADJUST mode the continuity tone if used will be inoperative.

Overrange Indications

When the tester is overranged, the most significant digit (MSD) "1" will blink and the other digits will go to 0 on all functions.

However, if the instrument is put on Range Hold, and the input value is beyond 1999, the instrument will continue to count up another 1000 counts to bring the final overrange value to 2999 with most significant digit (2) represented by a blinking "1."

Thus values from 200.0 to 299.9 can be read with greater resolution by resorting to the use of Range Hold.

When the tone  switch is on, an audible tone will be emitted when the tester is overranged on volts and current functions.

Overranged ohms function will not give a tone indication.

Input Jacks

The $V\Omega mA$ and common are used for all measurements except for current measurement above 200mA, in which case the 10A and common jacks are used.

TABLE 1

FUNCTION	INITIAL CONDITION	1st	2nd	3rd
DCV	AUTO 00.0	00.0	00.0	.000
RANGE	200mV	200mV	200mV	2V
ACV	AC AUTO .000	.000	.000	0.00
RANGE	2V	2V	2V	20V
Ω	AUTO 1''000	1''000	1''00.0	1''.000
RANGE	2000k Ω	2000k Ω	200 Ω	2k Ω
LP Ω	AUTO 1''000 Lo	1''000	1''.000	1''0.00
RANGE	2000k Ω	2000k Ω	2k Ω	20k Ω
mA				
RANGE	Constant	Constant	Constant	Constant

Note: 1'' Indicates Overrange

TABLE 2

INPUT APPLIED	INITIAL CONDITION	1st	2nd	3rd
1.5VDC	AUTO 1.500V	1.500V	1''00.0mV	1.500V
18.5k Ω	AUTO 18.5k Ω	18.5k Ω	1''00.0 Ω	1''.000k Ω

Note: 1'' Indicates Overrange

PRESSION OF RANGE SELECT BUTTON

	5th	6th	7th	8th
	00.0	000	00.0	.000
	200V	1000V	200mV	2V
	000	.000	0.00	00.0
	600V	2V	20V	200V
0.00	1''00.0	1''000	1''00.0	1''.000
Ω	200kΩ	2000kΩ	200Ω	2kΩ
0.0	1''000	1''.000	1''0.00	1''00.0
kΩ	2000kΩ	2kΩ	20kΩ	200kΩ

stant Constant Constant Constant Constant

PRESSION OF RANGE SELECT BUTTON

	5th	6th	7th	8th
V	01.5V	002V	1''00.0mV	1.500V
0kΩ	18.5kΩ	020kΩ	1''00.0Ω	1''.000kΩ

OPERATING INSTRUCTIONS

DC Voltage Measurements

WARNING

Maximum Input Voltage of DC VOLT Range is 1000VDC. Do NOT attempt to make any voltage measurement that might exceed 1000VDC in order to avoid electrical shock and/or damage to the instrument.

1. Insert black test lead into COM Jack and red test lead into V Ω mA Jack.
It is good practice to use black test lead for (-) polarity and red test lead for (+) polarity.
2. Set POWER SWITCH to ON position.
If tone is required, set POWER SWITCH to  position.
3. Set FUNCTION SELECTOR to VOLTS position.
4. Depress AC-DC button to select DC.
Note: DC sign is implied and is not shown on the display.
5. Short test prods of test leads together and depress ZERO ADJUST button to read zero plus or minus one digit. The ADJ sign appears on the display.
6. Connect black test prod to the negative side of the circuit being measured and red test prod to the positive side of the circuit.
7. Read the voltage on the display.
8. If manual ranging or range hold is desired, depress the RANGE SELECT button. The auto sign will disappear from display. Continue depressing until the decimal point indicates the desired range. See Table 1 for range indications.

OPERATING INSTRUCTIONS (Con't.)

9. Apply new voltage which corresponds to the range held or selected. Read display.

Note: If a range is fixed by using RANGE SELECT, display response time and tone response time become shorter than in autoranging.

10. Offset DC Measurements: Use ZERO ADJUST button to make offset measurements. Use following procedure.

- a. Apply into the instrument desired input value of less than 99 digits of the range being used, or equivalent values of last two digits.
- b. Depress ZERO ADJUST button. The input value is put into memory and ADJ sign is shown on the display, and last two digits go to zero.
- c. Make measurement of new voltage and read the difference value on the display.

Note: If the instrument is used in autoranging, the offset measurements can be made on the lowest voltage ranges (200mVDC and 2VAC) and current ranges.

If the range is fixed, the offset measurements can be made on each fixed range including OHM ranges.

For details, refer to "OFFSET MEASUREMENTS."

OPERATING INSTRUCTIONS (Con't.)

AC Voltage Measurements

WARNING

Maximum Input Voltage of AC VOLT Range is 600VAC. Do NOT attempt to make any voltage measurement that might exceed 600VAC in order to avoid electrical shock and/or damage to the instrument.

1. Insert black test lead into COM Jack and red test lead into VΩmA Jack.
2. Set POWER SWITCH to ON position.
Note: If tone is required, set POWER SWITCH to  position.
3. Set FUNCTION SELECTOR to VOLTS position.
4. Depress AC-DC button to select AC. AC sign appears on the display.
5. Make ZERO ADJUSTMENT if necessary to read zero plus or minus one digit. ADJ sign will appear on the display.
6. Connect black test prod to the grounded side of the circuit being measured and red test prod to the high side of the circuit.
7. Read the voltage on the digital display.
8. RANGE HOLD: Use RANGE SELECT button in the same way as in DC voltage measurements.
9. OFFSET MEASUREMENTS: Measurements are made in the same way as in DC voltage measurements.

OPERATING INSTRUCTIONS (Con't.)

DC Current Measurements

WARNING

Maximum Input Current of mA Range is 200mA, and 10A on Amp Range. Do NOT attempt to make any current measurement that might exceed the maximum input current of the range in order to avoid damage to the instrument.

1. Insert black test lead into COM Jack and red test lead into V Ω mA Jack when measuring 0 to 200mA. To measure 200mA up to 10A, use COM and 10A Jacks.
2. Set POWER SWITCH to ON position.
Note: If tone is required, for overrange warning set POWER SWITCH to  position.
3. Set FUNCTION SWITCH to desired position, 20mA, 200mA or 10A.
4. Depress AC-DC button to select DC. DC sign is implied and is not shown.
5. Make ZERO ADJUSTMENT if necessary to read zero plus or minus one digit. ADJ sign will appear on the display.
6. Remove power to the circuit being measured and open the circuit in which current is to be measured.
7. Observing polarity, connect black test prod to one side of the circuit and red test prod to the other side.

Note: When taking current measurements, always connect the instrument IN SERIES with the circuit being measured.

OPERATING INSTRUCTIONS (Con't.)

8. Apply power to the circuit being measured and read the current on the display.
9. Remove all power to the circuit being measured and discharge all capacitors.
10. Disconnect test leads from the circuit and reconnect the circuit to its original state.
11. **OFFSET MEASUREMENTS:** Perform in the same way as in DC voltage measurements. But, the test leads connection should be **IN SERIES** with the circuit being measured.

Note: RANGE SELECT does not operate on current ranges, because each current range consists of only one range.

AC Current Measurements

WARNING

Maximum Input Current of mA Range is 200mA, and 10A on Amp Range. Do NOT attempt to make any current measurement that might exceed the maximum input current of the range in order to avoid damage to the instrument.

1. Insert black test lead into COM Jack and red test lead into VΩmA Jack when measuring 0 to 200mA. To measure 200mA up to 10A, use COM and 10A Jacks.
2. Set POWER SWITCH to ON position.

Note: If tone is required, for overrange warning set POWER SWITCH to  position.

OPERATING INSTRUCTIONS (Con't.)

3. Set FUNCTION SELECTOR to desired position, 20mA, 200mA or 10A.
4. Depress AC-DC button to select AC. AC sign will appear on the display.
5. Make ZERO ADJUSTMENT to read zero plus or minus one digit. ADJ sign will appear on the display.
6. Remove power to the circuit being measured and open the circuit in which current is to be measured.
7. Observing polarity, connect black test prod to one side of the circuit and red test prod to the other side.

Note: When taking current measurements, always connect the instruments IN SERIES with the current being measured.

8. Apply power to the circuit being measured and read the current on the display.
9. Remove all power to the circuit being measured and discharge all capacitors.
10. Disconnect test leads from the circuit and reconnect the circuit to its original state.
11. OFFSET MEASUREMENTS: Perform in the same way as in DC voltage measurements. But, the test leads connection should be IN SERIES with the circuit being measured.

Note: RANGE SELECT does not operate on current ranges, because each current range consists of only one range.

OPERATING INSTRUCTIONS (Con't.)

Resistance Measurements

WARNING

Maximum Input Voltage on OHMS is 250VDC or AC. Before taking any in-circuit resistance measurements, remove power to the circuit being tested and discharge all capacitors in the circuit.

1. Insert black test lead into COM Jack and red test lead into V Ω mA Jack.
2. Set POWER SWITCH to ON position. If tone is required for continuity test, set POWER SWITCH to  position.

Note: A continuity tone will be heard when the resistance is less than 19 digits or counts, on any range, whether in auto or manual (fixed range).

3. Set FUNCTION SELECTOR to OHMS position. AUTO, 1000k Ω , will appear on the display with the most significant "1" digit blinking; this indicates overrange.
4. Depress LP Ω / Ω button to select Hi power OHMS (Ω). Hi power OHM sign is implied and is not shown on the display.
5. Short test prods of test leads together and read the value shown on the display.

Note: ZERO ADJUSTMENT is not needed when measuring resistance in auto-ranging mode for values of resistance above 200 Ω .

OPERATING INSTRUCTIONS (Con't.)

If measurements of less than 200Ω are to be made use the RANGE SELECT button to hold the 200Ω range (See Table 1 for decimal location for 200Ω range). With the test leads shorted together depress the ZERO ADJUST button, this will cancel the lead resistance and allow direct measurement of resistance under test. ZERO ADJUSTMENT can be disregarded on the fixed ranges higher than 200Ω range.

6. If the resistance being measured is connected to a circuit, remove power to the circuit being tested and discharge all capacitors.
7. Connect test prods of test leads to the circuit being measured and read the resistance on the display.

Note: When measuring resistance values less than 200Ω , always remember to subtract the resistance value of the test leads, from the reading on the display. If ZERO ADJUSTMENT is made this subtraction is made automatically.

8. RANGE HOLD: The instrument can be used in the manual mode in resistance measurements as well.

Use following procedure to hold desired range.

- a. Depress RANGE SELECT button noting the movement of the Decimal Point each time button is depressed, continue until the desired range is selected. (See Table 1).
- b. Apply the value of resistance for which the range was selected - read display.

OPERATING INSTRUCTIONS (Con't.)

9. **OFFSET MEASUREMENTS:** A resistance value of less than 99 digits, on the fixed range, can be put into memory and converted to zero by ZERO ADJUST button.

Another resistance value of less than 99 digits of the range being held can be applied and the difference value read on the digital display.

Low Power Resistance Measurements

The test voltages on $LP\Omega$ range are typically held less than 0.33V. Therefore, $LP\Omega$ range allows accurate measurements of in-circuit resistances directly shunted by typical silicon diodes and transistors.

WARNING

Maximum Input Voltage on OHM Range is 250VDC or AC. Before making any in-circuit resistance measurement, remove power to the circuit being tested and discharge all capacitors in the circuit.

To make in-circuit resistance measurements use the same measurement procedures as in "RESISTANCE MEASUREMENTS," except that the $LP\Omega/\Omega$ button is depressed so that $LP\Omega$ range is selected. The $LP\Omega$ sign will appear on the display.

Note: 200 Ω range is not included in Low Ohm Ranges, since Low Ohm Ranges consist of four ranges of 2k Ω , 20k Ω , 200k Ω and 2000 Ω .

ACCESSORIES AVAILABLE

Part No.	Description
79-513	Replacement Test Leads
79-516	Miniature Clip Lead
10-3141	Man-Made Leather Case (lid opens for use in case)
10-2969	Man-Made Leather Case (top opening)
10-2961	Vinyl Carrying Case (padded) Black
79-496	Model 15 Temperature Probe - Universal Temperature Probe reads -50°C to $+150^{\circ}\text{C}$ and -58°F to $+302^{\circ}\text{F}$
79-517	High Voltage Probe 0-6kVAC/DC
79-518	High Voltage Probe 0-30kVAC/DC
91-657	External Shunt 0-20AC/DC Amp
255-99	Wire Tilt Stand
10-3137	Battery Cover

APPLICATION NOTES

The following application notes are added to make your Triplet test even more useful. These notes by no means cover all the uses for your multimeter, but it is designed to help you utilize your tester to greater advantage.

Your multimeter is an average responding to pure sine wave RMS calibrated tester, but you may desire to use it to measure other types of voltage wave forms.

In the Table 3 below correction multipliers are given to make measurements of various types of wave forms.

TABLE 3

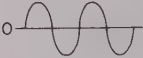
Wave Form	Type of Reading Reserved	Multiplier
Sine:	RMS	1
	Average	.9
	Peak	1.4
	Peak to Peak	2.8
Full Wave-Rectified Sine:	RMS	1
	Average	.9
	Peak	1.4
	Peak to Peak	1.4
Half Wave-Rectified Sine:	RMS	1.4
	Average	.9
	Peak	2.8
	Peak to Peak	2.8

TABLE 3 (Continued)

Wave Form	Type of Reading	Multiplier
	Reserved	
Square: 	RMS	.9
	Average	.9
	Peak	.9
	Peak to Peak	1.8
Half Wave Rectified Square: 	RMS	1.27
	Average	.9
	Peak	1.8
	Peak to Peak	1.8
Triangle or Sawtooth: 	RMS	1.04
	Average	.9
	Peak	1.8
	Peak to Peak	3.6
Full Wave-Rectified Triangle or Sawtooth: 	RMS	1.04
	Average	.9
	Peak	1.8
	Peak to Peak	1.8
Half Wave-Rectified Triangle or Sawtooth: 	RMS	1.47
	Average	.9
	Peak	1.8
	Peak to Peak	1.8

MAINTENANCE

The Model 3500 Digital Multimeter is designed for long reliable service, and therefore should not require any service other than annual certification of accuracy and good handling and housekeeping procedures.

Should service be required contact your local Triplett authorized service center or the factory.

Batteries

The battery compartment should be inspected occasionally to make certain the batteries have not developed a leak which might result in corrosion of contacts, etc.

If the Model 3500 is to be stored for any length of time, the batteries should be removed from the compartment.

Fuses

The fuses in the Model 3500 were selected to afford maximum protection to the unit. Under no circumstances should fuses other than those specified be used. The fuse type and value are as follows:

2A at 600VAC - Bussmann BBS 2

.3A at 250VAC- Littelfuse 212.300

REPLACEABLE PARTS MODEL 3500

Ref. No.	Description	Part No.
B1, B2	Battery 1½ V Size AA	37-39
C1	Capacitor 0.01μF (Cer.)	
C2, C7,		
C15, C16	Capacitor 0.1μF (Cer.)	
C3, C11,		
C12	Capacitor 0.1μF (Poly.)	
C4	Capacitor 39 pF (Cer.)	
C5	Capacitor 0.01μF (Poly.)	
C6	Capacitor 390 pF (Cer.)	
C8, C9,		
C13	Capacitor 2.2μF (Alumi.)	
C10	Capacitor 0.22μF (Poly.)	
C14, C17,		
C18	Capacitor 4.7μF (Alumi.)	
D1, D2,		
D3	Diode	127-147
D4, D5	Diode	127-148
D6	Diode	127-149
F1	Fuse 2 Amp	3207-61
F2	Fuse 0.3 Amp 250V	3207-77
LCD	LCD Readout	126-147
LSI	IC CMOS-LSI PX1	126-148
PCB	PC Bd Assy Readout Complete	87-610
PCB	PC Bd Assy Main Complete	87-611
R1	Resistor 240k 2W ± 5%	
R2	Resistor 8.99Ω ¼ W ± 0.5%	
R3	Resistor 47-100Ω ¼ W ± 1%	
R4	Resistor 0.998Ω ¼ W ± 0.5%	
R5	Resistor Approx. 12mΩ	
R6, R13,		
R20, R35	Resistor 100k ¼ W ± 5%	
R7	Resistor 1k 1W ± 5%	
R8	Resistor 163.5Ω ½ W ± 0.25%	
R9	Resistor 1.64k ¼ W ± 0.25%	
R10	Resistor 16.4k ¼ W ± 0.25%	
R11	Resistor 164k ¼ W ± 0.25%	

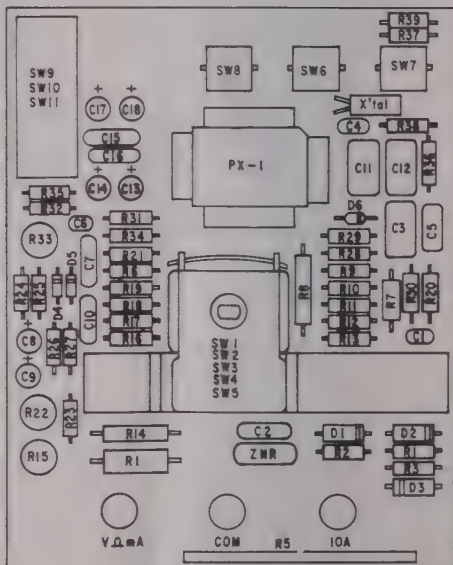
REPLACEABLE PARTS MODEL 3500 (Con't.)

Ref. No.	Description	Part No.
R12	Resistor 1.626M $\frac{1}{4}$ W $\pm 0.25\%$	
R14	Resistor 9.9M $\frac{1}{4}$ W $\pm 1\%$	
R15, R22	Resistor Variable 500k $\pm 30\%$	
R16	Resistor 1.111M $\frac{1}{4}$ W $\pm 0.25\%$	
R17	Resistor 101k $\frac{1}{4}$ W $\pm 0.25\%$	
R18	Resistor 10.01k $\frac{1}{4}$ W $\pm 0.25\%$	
R19	Resistor 1k $\frac{1}{4}$ W $\pm 0.25\%$	
R21	Resistor 22M $\frac{1}{4}$ W $\pm 20\%$	
R23	Resistor 21k $\frac{1}{4}$ W $\pm 1\%$	
R24, R25	Resistor 22k $\frac{1}{4}$ W $\pm 1\%$	
R26, R27	Resistor 330k $\frac{1}{4}$ W $\pm 5\%$	
R28	Resistor 402k $\frac{1}{4}$ W $\pm 1\%$	
R29	Resistor 280k $\frac{1}{4}$ W $\pm 1\%$	
R30	Resistor 6.56k $\frac{1}{4}$ W $\pm 2\%$	
R31	Resistor 19.6k $\frac{1}{4}$ W $\pm 1\%$	
R32	Resistor 6.2k $\frac{1}{4}$ W $\pm 1\%$	
R33	Resistor Variable 1k $\pm 30\%$	
R34	Resistor 1.8 ~ 3.3k $\frac{1}{4}$ W $\pm 1\%$	
R36, R37,		
R38	Resistor 1k $\frac{1}{4}$ W $\pm 5\%$	
R39	Resistor 33k $\frac{1}{4}$ W $\pm 5\%$	
SW1, SW2, SW3, SW4, SW5	Switch, Rotary	22-754
SW6, SW7, SW8	Switch, Button	22-755
SW9, SW10, SW11	Switch, Slide	22-756
X'TAL	Crystal	12481
ZNR	Varistor	15-5827
	Audio Transducer	12479
	Bumper Feet	98-77
	Case, Front	10-3138
	Case, Rear	10-3139
	Contact, Batt.	46-220
	Cover, Batt.	10-3137

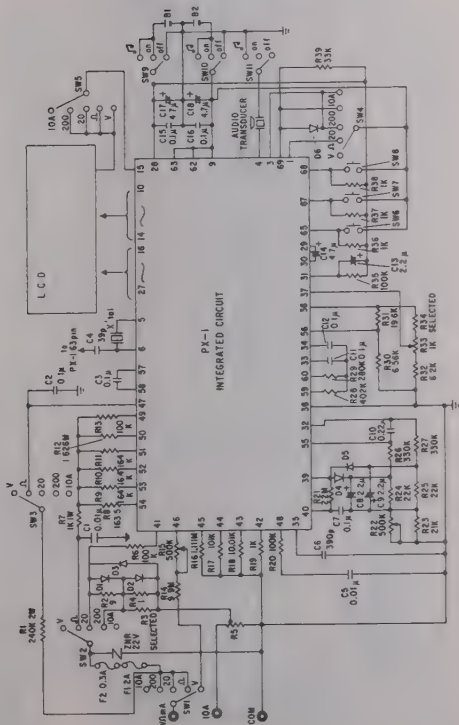
REPLACEABLE PARTS MODEL 3500 (Con't.)

Ref. No.	Description	Part No.
	Fuseholder	3207-78
	Fuseholder .3A-250V	3207-79
	Knob, Rotary	34-215
	Knob, Slide	34-216
	Knob, Button	34-217
	Label, Rear	58-815
	Panel, Front	28-1276
	Screw Case	24-875
	Screw Fuseholder	24-876
	Screw Fuseholder	24-877
	Screw LCD Unit	24-878
	Shield Case, Top	138-354
	Shield Case, Bottom	138-355
	Stand Tilt	255-99
	Test Lead Pkg.	79-513
	Window	19-261

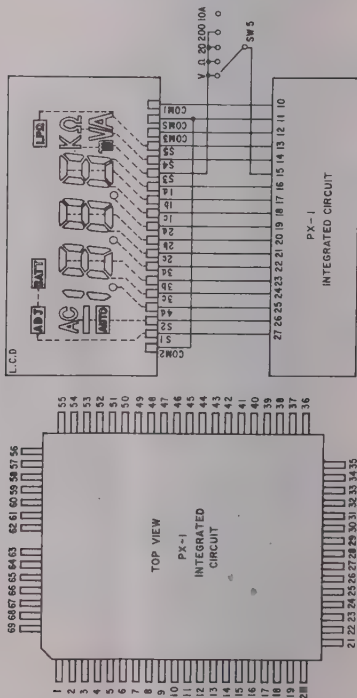
PARTS LOCATION CHART



SCHEMATIC



LCD to PX-1 CONNECTION DIAGRAM



LIMITED WARRANTY

The Triplett Corporation warrants instruments and test equipment manufactured by it to be free from defective material or factory workmanship and agrees to repair or replace such products which, under normal use and service, disclose the defect to be the fault of our manufacturing, with no charge for parts and service. If we are unable to repair or replace the product, we will make a refund of the purchase price. Consult the Instruction Manual for instructions regarding the proper use and servicing of instruments and test equipment. Our obligation under this warranty is limited to repairing, replacing or making refund of any instrument or test equipment which proves to be defective within one year from the date of original purchase.

This warranty does not apply to any of our products which have been repaired or altered by unauthorized persons in any way so as, in our sole judgment, to injure their stability or reliability, or which have been subject to misuse, abuse, misapplication, negligence or accident or which have had the serial numbers altered, defaced, or removed. Accessories, including batteries, not of our manufacture used with this product are not covered by this warranty.

To register a claim under the provisions of this warranty, return the instrument or test equipment to Triplett Corporation, Bluffton, Ohio 45817, transportation prepaid. Upon our inspection of the product, we will advise you as to the disposition of your claim.

ALL WARRANTIES IMPLIED BY LAW ARE HEREBY LIMITED TO A PERIOD OF ONE YEAR, AND THE PROVISIONS OF THE WARRANTY ARE EXPRESSLY IN LIEU OF ANY OTHER WARRANTIES EXPRESSED OR IMPLIED.

The purchaser agrees to assume all liability for any damages and bodily injury which may result from the use or misuse of the product by the purchaser, his employees, or others, and the remedies provided for in this warranty are expressly in lieu of any other liability Triplett Corporation may have, including incidental or consequential damages.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. No representative of Triplett Corporation or any other person is authorized to extend the liability of Triplett Corporation in connection with the sale of its products beyond the terms hereof.

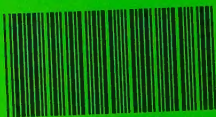
Triplett Corporation reserves the right to discontinue models at any time, or change specifications, price or design, without notice and without incurring any obligation.

This warranty gives you specific legal rights, and you may have other rights which vary from state to state.

Triplett Corporation
Bluffton, Ohio 43817

NOTES

MP MASTER



MA26416

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